THE SCIENCE OF EXERCISE SPECIALIZATION

by

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THE art of specialization in physical training is not as well understood, or as fully considered as should be. Actually, specialization provides the finishing touch to the body builder's development. It searches out the weaker, and the under developed muscles, and brings them to an equal state in strength and development with the stronger muscles. To those who have labored fruitlessly with stubborn muscles, specialization is the key to success. It is a boon to those who from injury or malformation are either incapacitated, deformed or under par. To the wise body builder who places a higher value upon the health of the various life zones, it is the benefactor in promoting longevity into the tissues of life, retaining youthful elasticity, flexibility and vigor.

Many are under the impression that as long as they follow out a general routine of exercise the body will become proportionately balanced, but this is not true. We must realize that the human body does not mature symmetrically balanced by itself, enjoying its fullest capacity of power. Many things make this improbable. Hereditary physical traits, or a slight irregularity in the ductless glands that control stature growth, which makes one small boned, large boned, thin or fat, are two of the predominating reasons, while occupation is another. Consequently, as we mature we see the effects of these traits, and a close retention of unbalance, even among those who have trained.

The larger, and better formed muscles will always respond more favorably to exercise, leaving the weaker muscles still subservient to the stronger groups. This condition inclines many to favor their more formative muscles, emphasizing the further development of these muscles at the expense of the others. This can be put down as a natural weakness among humans, sponsored by a vanity appeal to impress others with their particular development. This type often face embarrassment when they meet another who lacks the isolated outstanding development, but who outdo them easily in most feats of physical performance. The victor is more apt to have a balanced muscular arrangement with

better co-ordination, being free of the condition where one group of muscles, by their superior development and power, subject the rest. On the other hand, many who are honestly desirous of equalizing the distribution of power lack sufficient knowledge of anatomy to capably concentrate exercise upon the needy muscles. One should have a slight knowledge of anatomy, and the physiology of the human body, otherwise they are much like a blind man groping in the dark. Others think that by specializing, all they have to do is practice the same exercise for the certain part of the body which they have been regularly using. They overlook the fact that the muscles in time become accustomed to the one type of exercise, and become unresponsive to regular exercise persuasion. Exercise variety is the elixir of muscular growth. It stimulates ALL the muscular fibers, in the end making the muscles strong from every angle, and securing from them all possible growth.

You can prove to yourself how the muscles accept as a natural habit an exercise they have become accustomed to, and how the same muscles will fail to demonstrate as fully, when called to function from a slightly changed position. Take the One Arm Curl, where the exerciser stands erect with a dumb bell hanging by the side in the hand, and from there is slowly curled to the shoulder. From practice, one is soon able to curl a substantial weight, but as an example, instead of curling the bell from the side, hold the elbow well forward, and curl the weight without allowing the elbow to droop, a great difference in exertion will be found, yet one is still employing the same muscles, but from a different position. Progressive exercise usually takes care of variety. At least it should, for the true meaning of progression in exercise is in substituting another more progressive exercise for the one that has served its purpose.

Specialization in exercise should not be taken up at the beginner's stage, just because the novice craves a large chest, or a large pair of arms. Neither should it be taken midway in the training process of formative development. The body builder should first follow out a complete course that provides general training for the entire body for a period of at least several months. At the conclusion of this period, he should take a physical inventory of his development, at which time he will have no difficulty in identifying the parts of his body that have not responded in muscular growth as fully as other parts have. The underdeveloped muscles of his body should be noted and marked down, then a study made of the particular muscles located in these sections. From this one learns the mechanics of these particular muscles, and a check up on his previous training program will inform

him which exercises practiced lacked in providing sufficient progression. Armed with this knowledge he is better able to select a new group of exercises that will bring about the proper response, exercises that correspond with the particular mechanics of those muscles.

Let us consider the developing difficulties that seem to beset the average body builder who has actually finished a course of physical training.

From experience I find that the parts of the body most subject to these conditions are the deltoids—the muscles that cap the arm, forming a substantial part of the shoulders—the forearms, the legs, the small of the back, and the loins. Of these five regions, the arms and legs cause the body builder the most worry, partly because of their conspicuousness. The other undeveloped sectors not being so conspicuous he has given no consideration, or figures that they have been taken care of in the general body building program. In this he is wrong. The genuine body builder, the one who considers every part of his functioning body, will seek to specialize upon the small of the back, and the loins, because he knows they are so vitally important in healthfully stimulating the functioning processes of the life sources that repose within these sectors. From the standpoint of muscular development and strength, they are equally important, as is explained in detail in the book course entitled "Advanced Bar Bell Training."

The small of the back is dominated by the powerful erector muscles of the spine, and the loins are protected and supported by the large gluteal or buttock muscles, which bolster the spine in the sacrum, and lumbar regions. These two muscle groups supply the basic force to sustain both the upper, and lower body, in all physical efforts, particularly when supporting a weight on the shoulders, or in resisting the depression of gravity forced down on the lumbar and the pelvis as is created from lifting, or holding a weight at arms length overhead. To make this more clear, the erector muscles in the small of the back support the upper body, and the buttock muscles support the lumbar erectors, and help to maintain the rigidity of the thighs when subject to a physical effort.

Because of the dual importance of these two muscle groups as effecting external muscular power, and for stimulation of the internal systems, the value of specialization should be bestowed upon them.

The arms are purely physical factors. They have no impress upon organic function. They are the laboring appendages of the body, but from constant use the tissues are more densified in the

forearm than in the upper arm, consequently, the tissue is more difficult to break down which is necessary in order to permit the multiple order of cellular replacement. Exercise alone best fosters this feature that is representative of new and greater muscular growth. Then again, the forearm muscles are short bellied with long ligaments, whereas, the biceps of the upper arm are long bellied with short ligaments, which makes the biceps easier to develop, and the forearm muscles more difficult. This natural condition, coupled with the densification of tissue intensifies the difficulty, but from specialization the forearms will respond in size and strength. Being short muscles, one can train them more vigorously without any reaction on the organs, or the circulatory system.

The thighs are something different. They are the largest muscles in the body, and the farthest removed from the heart. Because of their heavier bulk they require a greater blood surge in order to fertilize all the tissues, and their remote position imposes a greater heart acceleration to pump the blood fuel to this sector, consequently, greater care is required in both the selection and application of exercise for the legs in any form whether in ordinary exercise or specialized.

The calf muscles do not appear to cause the pronounced heart acceleration as do the thighs, even though these muscles are further removed from the heart. The reason for this is that the calf muscles are much smaller units, and do not require as great a blood surge or nervous vibration.

The calves, like the forearms, are composed of short bellied muscles with longer, and of course, more powerful ligaments. From constant use in transporting the body weight, the tissues of these muscles become much more densified than in the forearms. The calf muscles are much harder, which supplies the answer to the problem of increasing growth in these muscles. But being muscle, they are subject to stimulative growth the same as are any others. Physiologically, the natural order of all muscular improvement is dominated by the law of tissue breakage and replacement. Therefore, it remains purely a matter of concentration and exercise.

The writer himself has experienced this difficulty. At one time my calf measurement was below the proportion of other girths before I began to specialize on them. For a time it seemed as though they would never improve, but finally they responded to concentrative specialization, ultimately increasing the calf girth from 14¼ to 18½, as they are today, and have been for many years.

It must be accepted that there are some types who cannot sub-

stantially change from a low bodyweight. They may be quite healthy, and very strong, but it is a natural glandular condition that limits the accumulative development. From my experience, I find that these types are a limited group. The majority of body builders can expect to secure improvement.

Coming to the fifth case, it is usually found that the deltoids are invariably under developed. For some unknown reason most instructors ignore treatment of the deltoids. If accosted with this neglect they offer the excuse that arm exercises take care of them. It is not true, as one can see from the flat shape of these muscles when the arms are raised toward the head, with elbows on a line level with the shoulders. When contracted, the deltoids from the arm position should be large, semi round mounds filling the spaces almost from the neck to the outer point of the shoulders. They are beautifully formed muscles, and not only set off appearance, but aid considerably in developing shoulder breadth. Besides they are powerful muscles that co-operate vigorously with arm and shoulder movements. They are important muscles from every standpoint. Yet one has to be careful in treating them. They are best influenced from the operation of arm leverage, mainly from positions leading to a straight arm in a line level with the shoulders. Due to the leverage imposed upon them from weight held at the extreme points of arm leverage, light weights should be used, particularly at the beginning, otherwise the deltoids, unaccustomed to this effort, are liable to acquire an unpleasant kink. Therefore, one should use apparatus that permits the leverage to be shortened and graduated. The exercise illustrations shown in this book course explain the series of positions that safeguard the deltoids from extreme leverage stress. These positions and the apparatus employed also permit the exerciser to use more weight comfortably to secure better results.

In this discussion I have covered the five muscular sectors that usually appear in part, or all, as sectors likely to be underdeveloped at the conclusion of a general training program, thereby subject to the study of specialization. At the same time, I recognize that others will notice a deficiency in other parts of the body, such as the neck, biceps, chest and so on. These other sectors can be treated in the same manner as specialization is explained herein; for this purpose I have selected deltoid development as the example for specialization, providing a complete series of exercise because nowhere in this Body Building Library or elsewhere, are they treated so completely, whereas, in this library there are other books that treat separately with every other part of the body, with complete illustrated courses that will efficiently guide and instruct the body builder.

The principle of exercise specialization is very simple. The exerciser selects four exercises, no more, to cover the part of the body to be treated. In this case we take the first four exercises shown in this course for the deltoids. A weight is selected well within your ability to handle so there is complete assurance that the exercises will be correctly performed, and not fatigue the muscles. The latter must be avoided. Once fatigue is set up, and the exerciser continues to exercise, the tissues become restricted to such an extent that blood fusion is deterred through the tissues depriving them of sufficient nourishment and fuel. It is very important that the muscles be not allowed to reach this point of tissue strangulation, for the muscle tissues rely upon an abundant blood suffusion in order to fertilize them with the nutrition of growth.

Practice the four exercises slowly and effectively. When completed, rest for a few minutes, which time should be delegated to the massage of these particular muscles to keep them pliable. Do not massage the muscles too harshly. Squeeze the muscles gently with the hand, and finish by trailing the fingers vigorously over the muscular surface to further stimulate blood circulation. After this period of rest, repeat the same exercises over again, then rest, and massage. This performance should be repeated on the same four exercises at least three times at one exercise period, and more if one feels capable, discontinuing the practice when the muscles experience a comfortable feeling of tiredness not bordering on fatigue.

Practice these exercises in the manner stated every night for one week with a well controlled poundage per exercise in order to accustom the muscles to the greater effort to come. The following week step up the weight per exercise and start back at the original low number of repetitions per exercises changing to the second four exercises, and practice in the same manner. By this time you will be able to use a substantial weight per exercise without any danger of any detrimental effects.

Understand, for the first four weeks you only practice four exercises at one time and so on. Every two weeks select the next four exercises until you have practiced the twelve exercises, which will absorb a period of six weeks. After the six-week period has been absorbed, and all the exercises performed, select six exercises and follow out the same program, using plenty of weight per exercise. If necessary, cut down on the number of repetitions, as weight is the important factor. Now begin to exercise every other night instead of nightly as before. Your training program will be as follows: Monday, Wednesday, Friday, Sunday, Tuesday, and so on. The reason for this change is because you are

now performing more exercises with more vigorous effort causing a greater tissue breakage, which requires additional time for natural replacement to take place. Follow this program for one month, then practice a different selection of six exercises. Do not practice more, instead, repeat the performance on the six exercises more times in one exercise period.

Do not make the mistake of practicing some other exercises during the rest period. To do this is to divert the blood flow from the selective area to another section. Blood is always drawn in greater quantity to any point under physical aggression, and since our desire is to promote growth in a selected area it must be kept there as fully as possible.

This procedure can be applied to any part of the body one desires to specialize on, except the thighs. More care must be taken in treating them. While the thighs can support a very heavy weight in various positions, yet one must not use too much. Heart acceleration must be kept down as much as possible, therefore, care must be taken in the amount of weight used. Repeating the performance of thigh exercises in one night should not exceed three times. With the arms, it is just the reverse, one can go the limit of repeat performances without detriment. When I speak of the arms, I mean to include the biceps of the upper arm, the triceps on the back of the upper arm, the forearms, the wrists, and the hands. No body builder should specialize upon the upper arm without considering the treatment of the biceps and the triceps at the one time. These muscles must balance in power. Exercise treating the forearm, will take care of the wrists, but not necessarily the gripping power of the hands, and an arm without a powerful grip is still a weak member.

The neck is considered to be the easiest part of the body to develop. The short powerful muscles aided with the strong muscles of the upper back permit a vigorous form of exercise that quickly shows results.

Every month take a lay off for one week in order to allow for greater tissue recuperation and replacement. During that week just practice breathing exercises. Get plenty of oxygen into the system. Always allow two hours to elapse after the last meal before exercising in the evening.

Concentrate religiously upon your training, and intelligently. Specialize with one motive in mind—to harmoniously balance your body in muscular development and strength so that a symmetry is developed that will give you all of the shapely masculine appearance you seek to possess.

EXERCISE No. 1

Stand erect with kettle bells at shoulders, and palms of hands facing directly front. From this position breathe in, and slowly raise the bells to arms length overhead. Breathe out as you lower, and practice the exercise 6 times. Every third practice night add one count until 18 counts are made, then add 5 lbs. to each bell and start over with 6 counts.

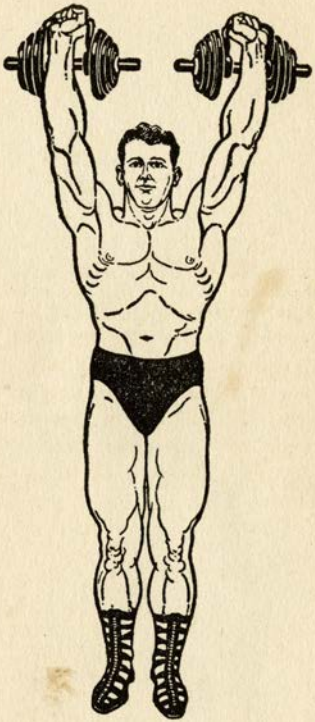

FIGURE 1

EXERCISE No. 2

Raise the bells to arms length overhead, from this position gradually lower one arm to position shown, as you return the arm back to the overhead position lower the other arm, repeating this movement 6 times with each arm. Every third practice night add one repetition until 12 counts with each arm are made, then increase the bells 2½ lbs. each and start over with 6 counts with each arm.

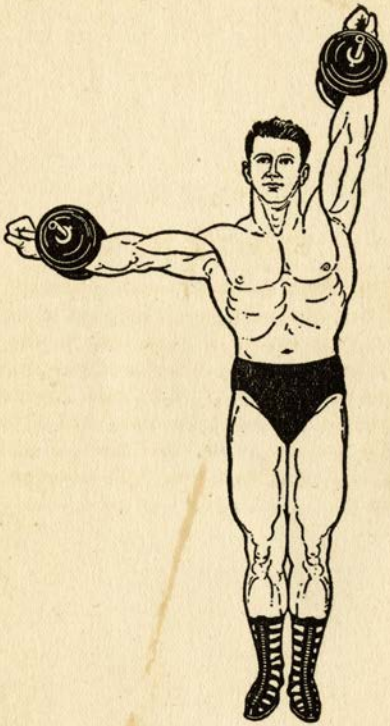

FIGURE 2

EXERCISE No. 3

Commence this exercise with the bells held at arms length overhead, from there slowly lower both bells until the upper arms are held on a line level with the shoulders and the forearm at the half straight position shown with palms facing out. From this position return bells to straight arms overhead. Breathe in as you lower, and out as you return to the overhead position. Practice this exercise 6 times. Every third practice night add one repetition until 12 counts are made, then add 2½ lbs. to each bell and start over with 6 counts.

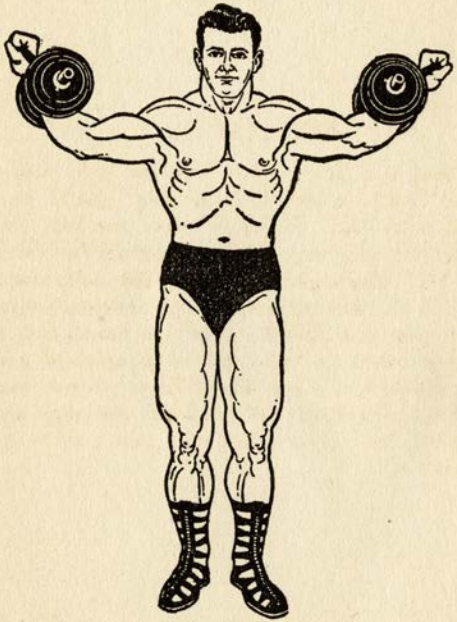

FIGURE 3

EXERCISE No. 4

Hold the kettle bells at the shoulders, breathe in and gradually lower the arms to three quarter straight arm position as shown. Pause, then return bells to shoulders, breathing out as you do so. Practice this exercise 6 times. Every third practice night add one count until 18 counts are made, then add 2½ lbs. to each bell and start over with 6 counts.

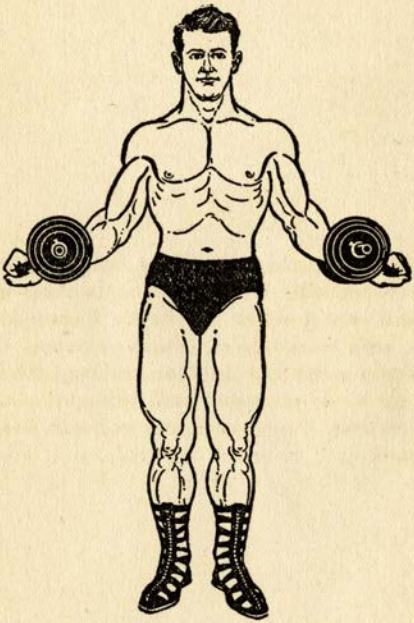

FIGURE 4

EXERCISE No. 5

Hold the bells at arms length overhead, and without bending the arms lower the bells with palms facing down, hand bent up on the wrist, until arms are in a line level with the shoulders as shown, then pause. Breathe in as you lower arms, and out as you bring bells to shoulders and press overhead to original position. Repeat this movement 6 times. Every third practice night add one repetition until 12 counts are made, then add 2½ lbs. to each bell and start over with 6 counts.

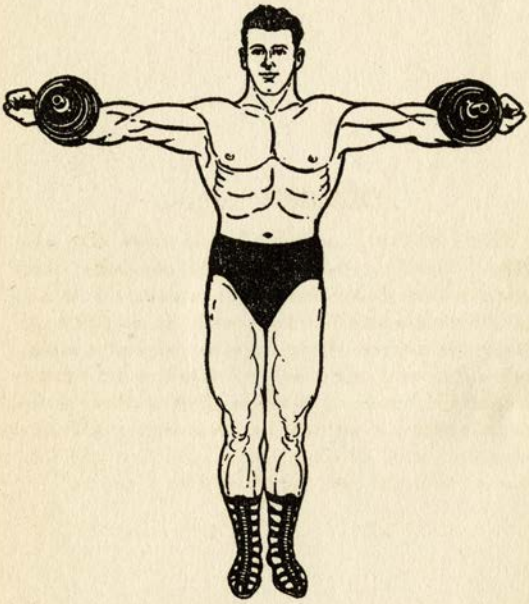

FIGURE 5

EXERCISE No. 6

Hold the bells overhead, and from this position lower the arms to the position shown. Keep shoulders well back and elbows always in a line level with the shoulders. Breathe in as you lower and out as you return to the original position. Practice this exercise 6 times. Every third practice night add one repetition until 18 counts are made, then add 5 lbs. to each bell and start over with 6 counts.

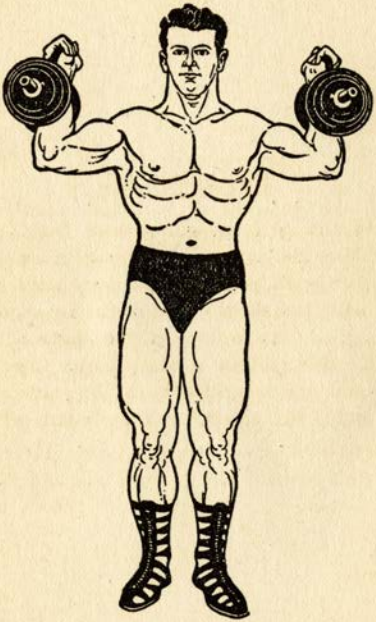

FIGURE 6

EXERCISE No. 7

Hold the bells at arms length overhead and slowly lower them to the position shown. Shoulders well back and arms in a line level with the shoulders. The palms of the hands must face up, and hands bent on the wrist toward the shoulders. Keep body erect throughout. Breathe in as you lower arms, and out as you bring bells to the shoulders, and press overhead prior to repeating the exercise. Practice this 6 times. Every third practice night add one repetition until 12 counts are made, then add 2½ lbs. to each bell and start over with 6 counts.

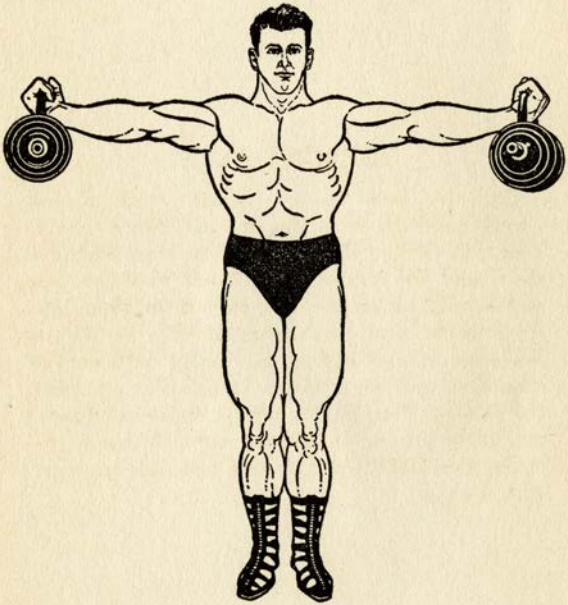

FIGURE 7

EXERCISE No. 8

Hold bells at arms length overhead with palms of hands facing front, slowly lower the bells to the three quarter straight arm position as shown. Keep elbows close to the sides throughout. Breathe in as you lower, and out as you raise bells to straight arm position overhead without pausing at the shoulders. Practice this exercise 6 times. Every third practice night add one repetition until 12 counts are made, then add 2½ lbs. to each bell and start over with 6 counts.

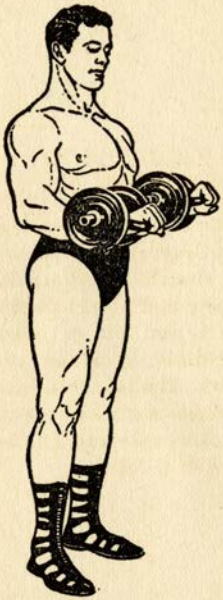

FIGURE 8

EXERCISE No. 9

Hold the arms in a line level with the shoulders with bells resting on forearm as shown in Exercise No. 5. From this position bend the arms at the elbows, describing a quarter circle with the bells until they touch the chest. Keep the elbows high. Breathe in as you do so and out as you slowly return the bells to the original position. Practice this exercise 6 times. Every third practice night add one repetition until 12 counts are made. Add 2½ lbs. to each bell and start over with 6 counts.

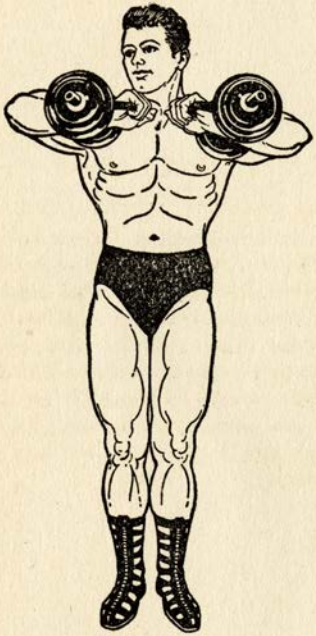

FIGURE 9

EXERCISE No. 10

Assume the same starting position as in Exercise No. 9. Instead of bringing both bells to the chest as in No. 9, at the one time, the arms are alternated. One coming to the chest as the other straightens out. Keep elbows high and body erect. Practice this exercise 6 times with each arm. Every third practice night add one repetition until 12 counts are made with each arm, then add 2½ lbs. to each bell and start over with 6 counts.

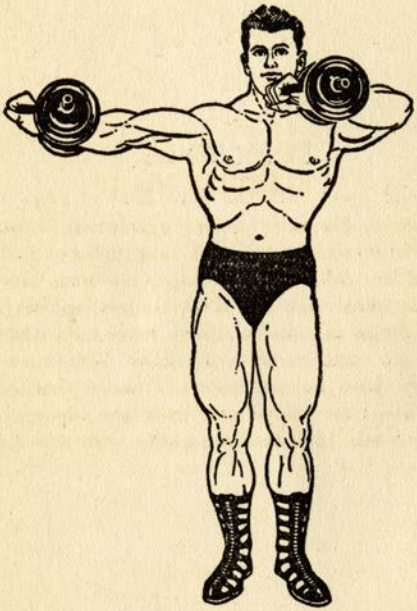

FIGURE 10

EXERCISE No. 11

Stand erect with the bells held at arms length overhead. From this position gradually lower the arms directly in front, bells no further apart than shoulder width, until in position shown. Keep the hands bent back on the wrist and palms front. Breathe in as you lower and out as you return the bells to straight arms overhead. The arms must not be bent as they return. Practice this exercise 6 times. Every third practice night add one repetition until 12 counts are made, then add 2½ lbs. to each bell and start over with 6 counts.

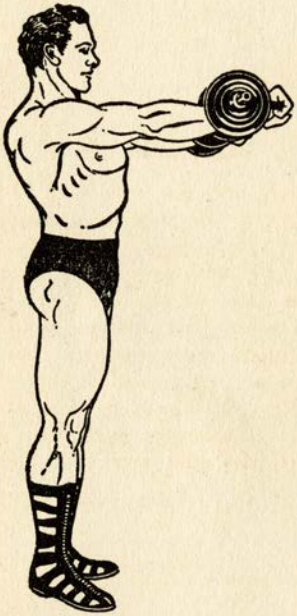

FIGURE 11

EXERCISE No. 12

Hold the bells at the shoulders, then lower them until both arms are at the position as shown by the left arm in the illustration. From this position raise the right arm from the side to the position shown. Arm in a straight line with the shoulder directly in front. As the straight arm is lowered begin to raise the left arm, repeating the movement with each arm six times. Breathe in and out regularly. Every third practice night add one repetition until 12 counts are made, then add 2½ lbs. to each bell and start over with 6 counts. Keep the hands bent up on the wrist as much as possible with palms facing down.

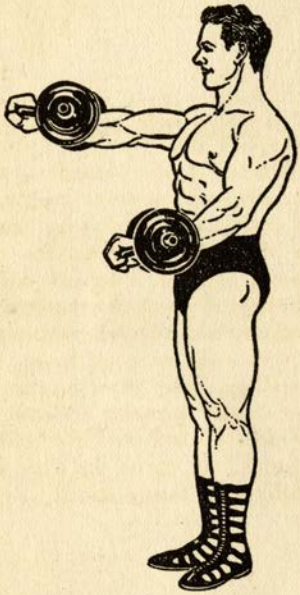

FIGURE 12

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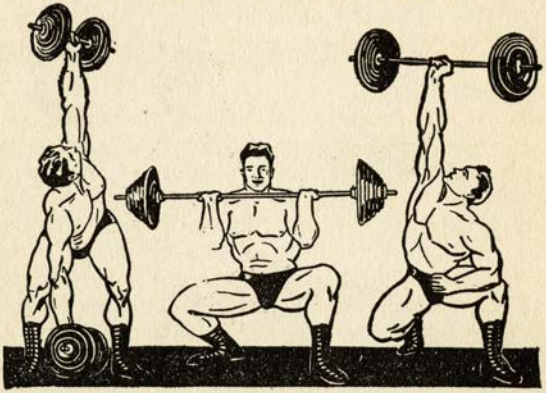

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